

CASL's Critical Thinking Assessment AY13 Executive Summary

See <http://www.eiu.edu/assess/wgdata.php> for full report

Watson-Glaser results (% accuracy and mean number correct out of total possible) by college and subtest from administrations in Summer 2012, Fall 2012, and Spring 2013.

	Inference	Recognize Assumption	Deduction	Interpretation	Evaluate Argument	Total Composite
CAH (N=360)	53.0% (M=3.71/7)	61.1% (M=4.89/8)	64.7% (M=5.82/9)	57.0% (M=3.99/7)	73.2% (M=6.59/9)	62.5% (M=25.00/40)
COS (N=403)	55.9% (M=3.91/7)	63.9% (M=5.11/8)	68.2% (M=6.14/9)	60.0% (M=4.20/7)	73.5% (M=6.62/9)	65.0% (M=26.00/40)
CEPS (N=448)	49.0% (M=3.43/7)	57.6% (M=4.61/8)	61.9% (M=5.57/9)	53.9% (M=3.77/7)	69.6% (M=6.27/9)	59.1% (M=23.64/40)
LCBAS (N=490)	52.7% (M=3.69/7)	63.1% (M=5.05/8)	64.9% (M=5.84/9)	58.4% (M=4.09/7)	72.0% (M=6.48/9)	62.9% (M=25.15/40)
BGS (N=211)	52.8% (M=3.70/7)	62.8% (M=5.02/8)	68.8% (M=6.19/9)	60.1% (M=4.21/7)	70.4% (M=6.34/9)	62.9% (M=25.44/40)
EIU Total (N=1193)	52.7% (M=3.69/7)	55% (M=4.94/8)	65.2% (M=5.87/9)	57.6% (M=4.03/7)	71.7% (M=6.46/9)	62.5% (M=25.00/40)
CHANCE	20%	50%	50%	50%	50%	45%

- The Watson-Glaser Critical Thinking Appraisal is a multiple choice standardized test
- The mean Composite Score last year was 25.0, which is consistent with recent years' data
- Norms from 6,713 adults in a variety of employment settings. Raw score of 25 corresponds to percentile rank of 36% for hourly/ entry-level positions, 33% for supervisors, 20% for professionals, 18% for

managers, 7-8% for executive/director.

- The skill that seniors were able to do with greater than 70% accuracy was to Evaluate an Argument. Making Inferences and Recognition of Assumptions were only between 50-55% accurate. (There are 7-9 items evaluated for each skill, so these subscales must be interpreted cautiously.)
- Research studies in instructional settings suggest that lab-centered/data-centered classes showed greater gains on WGCTA than traditional lecture courses; critical thinking courses, debate training, and group problem solving tasks have also resulted in higher WGCTA scores (see manual for references)

Results from the Voluntary System of Accountability (VSA) (Administered every 3 years)

The National Survey of Student Engagement (NSSE) –New data collected FA 2012 from 199 EIU freshmen & and SP 2013 from 381 EIU seniors. The table represents the percentage of EIU freshmen and seniors compared to other universities in our Carnegie comparison group of similar types of universities who responded “VERY MUCH” to the items.

	EIU Freshmen/ Carnegie Freshmen	EIU Seniors/ Carnegie Seniors
Evaluated point of view, decision, or information source	25% / 28%	30% / 33%
Examined strengths and weaknesses of your own views	14% / 22%	27% / 26%
Applied facts, theories or methods to practical problems or new situations	27% / 29%	35% / 38%

The Collegiate Learning Assessment was administered to 100 freshman in Fall 2011 and seniors in Spring 2012. NO TRANSFER STUDENTS WERE PART OF THE SAMPLE. Growth from freshman to senior year, was similar to other colleges in ability to Critique an Argument. No growth at EIU from freshman to senior year in ability to Make an Argument. Much smaller growth from freshman to senior year compared to other colleges in Analytic Reasoning and Problem Solving in Performance Tasks.

	Value-Added Performance Level	Value-Added Percentile Rank
Total CLA Score	BELOW Expected	7
Performance Task	BELOW Expected	10
Analytic Writing	BELOW Expected	9
Make-an-Argument	BELOW Expected	5
Critique-an-Argument	NEAR Expected	28
Value added takes into account beginning ACT level and looks at growth in scores from Freshman to Senior year.		

RATING OF LEVEL OF CRITICAL THINKING NECESSARY FOR ASSIGNMENTS IN THE EWP

During the Fall semester 2012, CASL members reviewed 427 papers submitted from 160 students' completed EWPs from AY 2011. CASL members attempted to evaluate the level of critical thinking that assignments asked for from students. The following working definitions were developed based on Bloom's Taxonomy for Critical Thinking.

BASIC SKILLS (LOW)

Knowledge/Comprehension—papers in which a student is asked to show her understanding of the subject matter (textbook, lecture, article reading, observation etc.). Typical assignments may include definitions, summaries, descriptions, and personal narratives. Such assignments may ask students to summarize information or experiences, relate ideas to each other or their own experience, explain material. Other assignments may include response papers, annotated bibliographies, basic summary literature reviews or article interpretation, personal narratives, basic descriptive papers, summarizing an interview or observation.

Application—these assignments ask the writer to apply/use acquired

knowledge, facts, techniques in various situations or to solve a problem. Such papers may explain complex material and then take that one step

further by exploring what the information means in terms of real life examples or case studies. Students apply knowledge or theories but do not need to provide much rationale, evidence, or analysis during the application. Common assignments include basic lab reports, locating resources, case study reports, basic literary analysis, simple reflection, summarizing an interview or observation and relating it to information learned in class. Using course information to develop a lesson plan, personal philosophy, study plan, or memo would also be examples of application assignments.

Level	High	Low	Total	% High	% Low
1000	21	37	58	36.21%	63.79%
2000	36	51	87	41.38%	58.62%
3000	66	68	134	49.25%	50.75%
4000	56	56	112	50.00%	50.00%
not given	4	13	17	23.53%	76.47%
Total	183	225	408	44.85%	55.15%

Level	High	Low	Total	% High	% Low
General Ed	66	73	139	47.48%	52.52%
Major	113	138	251	45.02%	54.98%
FYE		1	1	0.00%	100.00%
not given	4	13	17	23.53%	76.47%
Total	183	225	408	44.85%	55.15%

REQUIRES HIGHER LEVELS OF CRITICAL THINKING (HIGH)

Analysis—an analysis asks the writer to examine an issue, problem, text, case study, experiment, and look for trends/patterns/themes (possibly from a single source or personal perspective) in close detail. Some evidence and rationale to support claims, judgments and decisions are required. Critical evaluation of parts of argument, developing a plan to solve a specific problem, recognizing assumptions and bias may be required. Students may be asked to test or examine a hypothesis or compare and contrast a set of ideas. Common assignments include journal article or other type of single source (e.g. literary/movie) critique, argumentative/persuasive essays, critique of an observational experience.

Synthesis—this kind of assignment is akin to the analysis in depth (usually from multiple sources or perspectives), where the writer is required to bring together information (integrate), ideas, examples to create a new argument, way of looking at a problem, or understanding and using complex material. Conclusions are

formed and supported. Many papers that ask a student to solve a problem will fall into this category, such as proposals to solve multifaceted problems, business plans, research papers, and argumentative/persuasive essays. Developing designs/plans/proposals by looking at multiple perspectives or options and formulating contingencies would require synthesis. Developing conclusions or describing commonalities/differences from multiple observational experiences would also require synthesis.

Evaluation—papers that are evaluative in nature require the writer to establish a set of criteria and then present/defend her/his opinion/hypothesis using strong levels of evidence. Research and expertise must be established to judge and make the argument strong. The writer goes beyond analyzing and synthesizing to provide a new and informed conclusion, or put multiple authors/sources in conversation with one another and evaluates the conversation through novel lenses or conceptual frameworks. Evaluation is a large part of all research—whether scientific, artistic, sociological, or applied. Typical assignments may be critical reviews, argumentative essays, research papers, literary analysis and complex interpretive lab reports.

College	High	Low	Total	% High	% Low
CAH	79	72	151	52.32%	47.68%
CEPS	23	56	79	29.11%	70.89%
COS	33	40	73	45.21%	54.79%
LCBAS	43	36	79	54.43%	45.57%
Cont. Ed(BGS)	1	8	9	11.11%	88.89%
not given	4	13	17	23.53%	76.47%
Total	183	225	408	44.85%	55.15%

